



RECEIVED OIPE

SEP 29 2003

TECH CENTER 18002300

RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/236,939

DATE: 09/23/2003

TIME: 17:57:49

Input Set : N:\Crf3\RULE60\09236939.raw.txt

Output Set: N:\CRF4\09232003\I236939.raw

SEQUENCE LISTING

3 (1) GENERAL INFORMATION:

5 (i) APPLICANT: Godowski, Paul J.
6 Mark, Melanie R.
7 Scadden, David T.
8 Baker, Kevin P.
9 Baron, Will F.

11 (ii) TITLE OF INVENTION: Protein Tyrosine Kinases

13 (iii) NUMBER OF SEQUENCES: 35

15 (iv) CORRESPONDENCE ADDRESS:

16 (A) ADDRESSEE: Genentech, Inc.
17 (B) STREET: 460 Point San Bruno Blvd
18 (C) CITY: South San Francisco
19 (D) STATE: California
20 (E) COUNTRY: USA
21 (F) ZIP: 94080

23 (v) COMPUTER READABLE FORM:

24 (A) MEDIUM TYPE: 5.25 inch, 360 Kb floppy disk
25 (B) COMPUTER: IBM PC compatible
26 (C) OPERATING SYSTEM: PC-DOS/MS-DOS
27 (D) SOFTWARE: patin (Genentech)

29 (vi) CURRENT APPLICATION DATA:

C--> 30 (A) APPLICATION NUMBER: US/09/236,939

C--> 31 (B) FILING DATE: 25-Jan-1999

32 (C) CLASSIFICATION: 435

37 (vii) PRIOR APPLICATION DATA:

35 (A) APPLICATION NUMBER: US/08/170,558

36 (B) FILING DATE: 20-DEC-1993

38 (A) APPLICATION NUMBER: 08/157563

39 (B) FILING DATE: 23-NOV-1993

41 (viii) ATTORNEY/AGENT INFORMATION:

42 (A) NAME: Hasak, Janet E.

43 (B) REGISTRATION NUMBER: 28,616

44 (C) REFERENCE/DOCKET NUMBER: 854C1

46 (ix) TELECOMMUNICATION INFORMATION:

47 (A) TELEPHONE: 415/225-1896

48 (B) TELEFAX: 415/952-9881

49 (C) TELEX: 910/371-7168

51 (2) INFORMATION FOR SEQ ID NO: 1:

53 (i) SEQUENCE CHARACTERISTICS:

54 (A) LENGTH: 3611 bases

55 (B) TYPE: nucleic acid

56 (C) STRANDEDNESS: single

ENTERED

RAW SEQUENCE LISTING

DATE: 09/23/2003

PATENT APPLICATION: US/09/236,939

TIME: 17:57:49

Input Set : N:\Crif3\RULE60\09236939.raw.txt

Output Set : N:\CRF4\09232003\I236939.raw

```

57      (D) TOPOLOGY: linear
59      (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 1:
62      CCGCCGATGG CGCTGAGGCG GAGCATGGGG CGGCCGGGGC TCCCGCCGCT 50
65      GCCGCTGCCG CCGCCACCGC GGCTCGGGCT GCTGCTGGCG GCTCTGGCTT 100
68      CTCTGCTGCT CCCGGAGTCC GCCGCCGCAG GTCTGAAGCT CATGGGAGCC 150
71      CCGGTGAAGC TGACAGTGTC TCAGGGGCAG CCGGTGAAGC TCAACTGCAG 200
74      TGTGGAGGGG ATGGAGGAGC CTGACATCCA GTGGGTGAAG GATGGGGCTG 250
77      TGGTCCAGAA CTTGGACCAG TTGTACATCC CAGTCAGCGA GCAGCACTGG 300
80      ATCGGCTTCC TCAGCCTGAA GTCAGTGGAG CGCTCTGACG CCGGCCGGTA 350
83      CTGGTGCCAG GTGGAGGATG GGGGTGAAAC CGAGATCTCC CAGCCAGTGT 400
86      GGCTCACGGT AGAAGGTGTG CCATTTTCA CAGTGGAGCC AAAAGATCTG 450
89      GCAGTGCCAC CCAATGCCCC TTTCCAACCTG TCTTGTGAGG CTGTGGGTCC 500
92      CCCTGAACCT GTTACCATTG TCTGGTGGAG AGGAACTACG AAGATCGGGG 550
95      GACCCGCTCC CTCTCCATCT GTTTTAAATG TAACAGGGGT GACCCAGAGC 600
98      ACCATGTTTT CCTGTGAAGC TCACAACCTA AAAGGCCTGG CCTCTTCTCG 650
101     CACAGCCACT GTTCACCTTC AAGCACTGCC TGCAGCCCCC TTCAACATCA 700
104     CCGTGACAAA GCTTTCAGC AGCAACGCTA GTGTGGCCTG GATGCCAGGT 750
107     GCTGATGGCC GAGCTCTGCT ACAGTCCTGT ACAGTTCAGG TGACACAGGC 800
110     CCCAGGAGGC TGGGAAGTCC TGGCTGTTGT GGTCCCTGTG CCCCCCTTTA 850
113     CCTGCCTGCT CCGGGACCTG GTGCCTGCCA CCAACTACAG CCTCAGGGTG 900
116     CGCTGTGCCA ATGCCCTGGG GCCCTCTCCC TATGCTGACT GGGTGCCCTT 950
119     TCAGACCAAG GGTCTAGCCC CAGCCAGCGC TCCCCAAAAC CTCCATGCCA 1000
122     TCCGCACAGA TTCAGGCCTC ATCTTGAGT GGAAGAAGT GATCCCCGAG 1050
125     GCCCCTTTGG AAGGCCCCCT GGGACCCTAC AAAGTGTCTT GGGTTCAAGA 1100
128     CAATGGAACC CAGGATGAGC TGACAGTGGA GGGGACCAGG GCCAATTTGA 1150
131     CAGGCTGGGA TCCCCAAAAG GACCTGATCG TACGTGTGTG CGTCTCCAAT 1200
134     GCAGTTGGCT GTGGACCCTG GAGTCAGCCA CTGGTGGTCT CTTCTCATGA 1250
137     CCGTGACAGG CAGCAGGGCC CTCCTCACAG CCGCACATCC TGGGTACCTG 1300
140     TGGTCCCTGG TGTGCTAACG GCCCTGGTGA CGGCTGCTGC CCTGGCCCTC 1350
143     ATCTGCTTC GAAAGAGACG GAAAGAGACG CGGTTTGGGC AAGCCTTTGA 1400
146     CAGTGTCATG GCCCGGGGAG AGCCAGCCGT TCACTTCCGG GCAGCCCGGT 1450
149     CCTCAATCG AGAAAGGCCC GAGCGCATCG AGGCCACATT GGACAGCTTG 1500
152     GGCATCAGCG ATGAATAAA GGAATAACTG GAGGATGTGC TCATCCCAGA 1550
155     GCAGCAGTTC ACCCTGGGCC GGATGTTGGG CAAAGGAGAG TTTGGTTCAG 1600
158     TGCGGGAGGC CCAGCTGAAG CAAGAGGATG GCTCCTTTGT GAAAGTGGCT 1650
161     GTGAAGATGC TGAAGCTGA CATCATTGCC TCAAGCGACA TTGAAGAGTT 1700
164     CCTCAGGGAA GCAGCTTGCA TGAAGGAGTT TGACCATCCA CACGTGGCCA 1750
167     AACTTGTTGG GGTAAGCCTC CGGAGCAGGG CTAAAGGCCG TCTCCCCATC 1800
170     CCCATGGTCA TCTTGCCCTT CATGAAGCAT GGGGACCTGC ATGCCTTCCT 1850
173     GCTCGCCTCC CGGATTGGGG AGAACCCTT TAACCTACCC CTCCAGACCC 1900
176     TGATCCGGTT CATGGTGGAC ATTGCCTGCG GCATGGAGTA CCTGAGCTCT 1950
179     CGGAACCTCA TCCACCGAGA CCTGGCTGCT CGGAATTGCA TGCTGGCAGA 2000
182     GGACATGACA GTGTGTGTGG CTGACTTCGG ACTCTCCCGG AAGATCTACA 2050
185     GTGGGGACTA CTATCGTCAA GGCTGTGCCT CCAAAGTGGC TGTCAGGTGG 2100
188     CTGGCCCTGG AGAGCCTGGC CGACAACCTG TATACTGTGC AGAGTGACGT 2150
191     GTGGGCGTTC GGGGTGACCA TGTGGGAGAT CATGACACGT GGGCAGACGC 2200
194     CATATGCTGG CATCGAAAAC GCTGAGATTT ACAACTACCT CATTGGCGGG 2250
197     AACCGCTGAG AACAGCCTCC GGAGTGTATG GAGGACGTGT ATGATCTCAT 2300
200     GTACCAGTGC TGGAGTGCTG ACCCAAGCA GCGCCCGAGC TTTACTTGTC 2350

```

RAW SEQUENCE LISTING

DATE: 09/23/2003

PATENT APPLICATION: US/09/236,939

TIME: 17:57:49

Input Set : N:\Crf3\RULE60\09236939.raw.txt

Output Set: N:\CRF4\09232003\I236939.raw

```

203  TCGAATGGA ACTGGAGAAC ATCTTGGGCC AGCTGTCTGT GCTATCTGCC 2400
206  AGCCAGGACC CCTTATACAT CAACATCGAG AGAGCTGAGG AGCCCACTGC 2450
209  GGGAGGCAGC CTGGAGCTAC CTGGCAGGGA TCAGCCCTAC AGTGGGGCTG 2500
212  GGGATGGCAG TGGCATGGGG GCTGTGGGTG GCACTCCAG TGACTGTGG 2550
215  TACATACTCA CCCCCGGAGG GCTGGCTGAG CAGCCAGGGC AGGCAGAGCA 2600
218  CCAGCCAGAG AGTCCCTCA ATGAGACACA GAGGCTTTTG CTGCTGCAGC 2650
221  AAGGGCTACT GCCACACAGT AGCTGTTAGC CCACAGGCAG AGGGCATCGG 2700
224  GGCCATTTGG CCGGCTCTGG TGGCCACTGA GCTGGCTGAC TAAGCCCCGT 2750
227  CTGACCCAG CCCAGACAGC AAGGTGTGGA GGCTCCTGTG GTAGTCCTCC 2800
230  CAAGCTGTGC TGGGAAGCCC GGAAGTACCA AATCACCCAA TCCCAGTTCT 2850
233  TCCTGCAACC ACTCTGTGGC CAGCCTGGCA TCAGTTTAGG CCTTGGCTTG 2900
236  ATGGAAGTGG GCCAGTCCTG GTTGTCTGAA CCCAGGCAGC TGGCAGGAGT 2950
239  GGGGTGGTTA TGTTTCCATG GTTACCATGG GTGTGGATGG CAGTGTGGGG 3000
242  AGGGCAGGTC CAGCTCTGTG GGCCCTACCC TCCTGCTGAG CTGCCCTGC 3050
245  TGCTTAAGTG CATGCATTGA GCTGCCTCCA GCCTGGTGGC CCAGCTATTA 3100
248  CCACACTTGG GGTTTAAATA TCCAGGTGTG CCCCTCCAAG TCACAAAGAG 3150
251  ATGTCCTTGT AATATTCCTT TTTAGGTGAG GGTTGGTAAG GGGTTGGTAT 3200
254  CTCAGGTCTG AATCTTCACC ATCTTTCTGA TTCCGCACCC TGCCTACGCC 3250
257  AGGAGAAAGT GAGGGGAGCA TGCTTCCCTG CAGCTGACCG GGTACACAAA 3300
260  AGGCATGCTG GAGTACCCAG CCTATCAGGT GCCCTCTTC CAAAGGCAGC 3350
263  GTGCCGAGCC AGCAAGAGGA AGGGGTGCTG TGAGGCTTGC CCAGGAGCAA 3400
266  GTGAGGCCGG AGAGGAGTTC AGGAACCTT CTCCATACCC ACAATCTGAG 3450
269  CACGCTACCA AATCTCAAAA TATCCTAAGA CTAACAAAGG CAGCTGTGTC 3500
272  TGAGCCCAAC CCTTCTAAAC GGTGACCTTT AGTGCCAACT TCCCCTCTAA 3550
275  CTGGACAGCC TCTTCTGTCC CAAGTCTCCA GAGAGAAATC AGGCCTGATG 3600
278  AGGGGGAATT C 3611

```

282 (2) INFORMATION FOR SEQ ID NO: 2:

284 (i) SEQUENCE CHARACTERISTICS:

285 (A) LENGTH: 890 amino acids

286 (B) TYPE: amino acid

287 (D) TOPOLOGY: linear

289 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 2:

```

291  Met Ala Leu Arg Arg Ser Met Gly Arg Pro Gly Leu Pro Pro Leu
292  1      5      10      15
294  Pro Leu Pro Pro Pro Pro Arg Leu Gly Leu Leu Ala Ala Leu
295  20      25      30
297  Ala Ser Leu Leu Leu Pro Glu Ser Ala Ala Ala Gly Leu Lys Leu
298  35      40      45
300  Met Gly Ala Pro Val Lys Leu Thr Val Ser Gln Gly Gln Pro Val
301  50      55      60
303  Lys Leu Asn Cys Ser Val Glu Gly Met Glu Glu Pro Asp Ile Gln
304  65      70      75
306  Trp Val Lys Asp Gly Ala Val Val Gln Asn Leu Asp Gln Leu Tyr
307  80      85      90
309  Ile Pro Val Ser Glu Gln His Trp Ile Gly Phe Leu Ser Leu Lys
310  95      100     105
312  Ser Val Glu Arg Ser Asp Ala Gly Arg Tyr Trp Cys Gln Val Glu
313  110     115     120
315  Asp Gly Gly Glu Thr Glu Ile Ser Gln Pro Val Trp Leu Thr Val

```

RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/236,939

DATE: 09/23/2003

TIME: 17:57:49

Input Set : N:\Crif3\RULE60\09236939.raw.txt

Output Set: N:\CRF4\09232003\I236939.raw

316		125		130		135
318	Glu Gly Val Pro	Phe Phe Thr Val	Glu Pro Lys Asp Leu Ala	Val		
319		140		145		150
321	Pro Pro Asn Ala	Pro Phe Gln Leu Ser	Cys Glu Ala Val Gly	Pro		
322		155		160		165
324	Pro Glu Pro Val	Thr Ile Val Trp Trp	Arg Gly Thr Thr Lys	Ile		
325		170		175		180
327	Gly Gly Pro Ala	Pro Ser Pro Ser Val	Leu Asn Val Thr Gly	Val		
328		185		190		195
330	Thr Gln Ser Thr	Met Phe Ser Cys Glu	Ala His Asn Leu Lys	Gly		
331		200		205		210
333	Leu Ala Ser Ser	Arg Thr Ala Thr Val	His Leu Gln Ala Leu	Pro		
334		215		220		225
336	Ala Ala Pro Phe	Asn Ile Thr Val Thr	Lys Leu Ser Ser Ser	Asn		
337		230		235		240
339	Ala Ser Val Ala	Trp Met Pro Gly Ala	Asp Gly Arg Ala Leu	Leu		
340		245		250		255
342	Gln Ser Cys Thr	Val Gln Val Thr Gln	Ala Pro Gly Gly Trp	Glu		
343		260		265		270
345	Val Leu Ala Val	Val Val Pro Val Pro	Pro Phe Thr Cys Leu	Leu		
346		275		280		285
348	Arg Asp Leu Val	Pro Ala Thr Asn Tyr	Ser Leu Arg Val Arg	Cys		
349		290		295		300
351	Ala Asn Ala Leu	Gly Pro Ser Pro Tyr	Ala Asp Trp Val Pro	Phe		
352		305		310		315
354	Gln Thr Lys Gly	Leu Ala Pro Ala Ser	Ala Pro Gln Asn Leu	His		
355		320		325		330
357	Ala Ile Arg Thr	Asp Ser Gly Leu Ile	Leu Glu Trp Glu Glu	Val		
358		335		340		345
360	Ile Pro Glu Ala	Pro Leu Glu Gly Pro	Leu Gly Pro Tyr Lys	Leu		
361		350		355		360
363	Ser Trp Val Gln	Asp Asn Gly Thr Gln	Asp Glu Leu Thr Val	Glu		
364		365		370		375
366	Gly Thr Arg Ala	Asn Leu Thr Gly Trp	Asp Pro Gln Lys Asp	Leu		
367		380		385		390
369	Ile Val Arg Val	Cys Val Ser Asn Ala	Val Gly Cys Gly Pro	Trp		
370		395		400		405
372	Ser Gln Pro Leu	Val Val Ser Ser His	Asp Arg Ala Gly Gln	Gln		
373		410		415		420
375	Gly Pro Pro His	Ser Arg Thr Ser Trp	Val Pro Val Val Leu	Gly		
376		425		430		435
378	Val Leu Thr Ala	Leu Val Thr Ala Ala	Ala Leu Ala Leu Ile	Leu		
379		440		445		450
381	Leu Arg Lys Arg	Arg Lys Glu Thr Arg	Phe Gly Gln Ala Phe	Asp		
382		455		460		465
384	Ser Val Met Ala	Arg Gly Glu Pro Ala	Val His Phe Arg Ala	Ala		
385		470		475		480
387	Arg Ser Phe Asn	Arg Glu Arg Pro Glu	Ile Glu Ala Thr Leu			
388		485		490		495

RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/236,939

DATE: 09/23/2003

TIME: 17:57:49

Input Set : N:\Crf3\RULE60\09236939.raw.txt

Output Set: N:\CRF4\09232003\I236939.raw

```

390 Asp Ser Leu Gly Ile Ser Asp Glu Leu Lys Glu Lys Leu Glu Asp
391          500          505          510
393 Val Leu Ile Pro Glu Gln Gln Phe Thr Leu Gly Arg Met Leu Gly
394          515          520          525
396 Lys Gly Glu Phe Gly Ser Val Arg Glu Ala Gln Leu Lys Gln Glu
397          530          535          540
399 Asp Gly Ser Phe Val Lys Val Ala Val Lys Met Leu Lys Ala Asp
400          545          550          555
402 Ile Ile Ala Ser Ser Asp Ile Glu Glu Phe Leu Arg Glu Ala Ala
403          560          565          570
405 Cys Met Lys Glu Phe Asp His Pro His Val Ala Lys Leu Val Gly
406          575          580          585
408 Val Ser Leu Arg Ser Arg Ala Lys Gly Arg Leu Pro Ile Pro Met
409          590          595          600
411 Val Ile Leu Pro Phe Met Lys His Gly Asp Leu His Ala Phe Leu
412          605          610          615
414 Leu Ala Ser Arg Ile Gly Glu Asn Pro Phe Asn Leu Pro Leu Gln
415          620          625          630
417 Thr Leu Ile Arg Phe Met Val Asp Ile Ala Cys Gly Met Glu Tyr
418          635          640          645
420 Leu Ser Ser Arg Asn Phe Ile His Arg Asp Leu Ala Ala Arg Asn
421          650          655          660
423 Cys Met Leu Ala Glu Asp Met Thr Val Cys Val Ala Asp Phe Gly
424          665          670          675
426 Leu Ser Arg Lys Ile Tyr Ser Gly Asp Tyr Tyr Arg Gln Gly Cys
427          680          685          690
429 Ala Ser Lys Leu Pro Val Lys Trp Leu Ala Leu Glu Ser Leu Ala
430          695          700          705
432 Asp Asn Leu Tyr Thr Val Gln Ser Asp Val Trp Ala Phe Gly Val
433          710          715          720
435 Thr Met Trp Glu Ile Met Thr Arg Gly Gln Thr Pro Tyr Ala Gly
436          725          730          735
438 Ile Glu Asn Ala Glu Ile Tyr Asn Tyr Leu Ile Gly Gly Asn Arg
439          740          745          750
441 Leu Lys Gln Pro Pro Glu Cys Met Glu Asp Val Tyr Asp Leu Met
442          755          760          765
444 Tyr Gln Cys Trp Ser Ala Asp Pro Lys Gln Arg Pro Ser Phe Thr
445          770          775          780
447 Cys Leu Arg Met Glu Leu Glu Asn Ile Leu Gly Gln Leu Ser Val
448          785          790          795
450 Leu Ser Ala Ser Gln Asp Pro Leu Tyr Ile Asn Ile Glu Arg Ala
451          800          805          810
453 Glu Glu Pro Thr Ala Gly Gly Ser Leu Glu Leu Pro Gly Arg Asp
454          815          820          825
456 Gln Pro Tyr Ser Gly Ala Gly Asp Gly Ser Gly Met Gly Ala Val
457          830          835          840
459 Gly Gly Thr Pro Ser Asp Cys Arg Tyr Ile Leu Thr Pro Gly Gly
460          845          850          855
462 Leu Ala Glu Gln Pro Gly Gln Ala Glu His Gln Pro Glu Ser Pro

```

RAW SEQUENCE LISTING ERROR SUMMARY
PATENT APPLICATION: US/09/236,939

DATE: 09/23/2003
TIME: 17:57:50

Input Set : N:\Crf3\RULE60\09236939.raw.txt
Output Set: N:\CRF4\09232003\I236939.raw

Invalid Line Length:

The rules require that a line not exceed 72 characters in length. This includes spaces.

Seq#:1; Line(s) 282
Seq#:2; Line(s) 471
Seq#:3; Line(s) 702
Seq#:4; Line(s) 894
Seq#:5; Line(s) 978
Seq#:6; Line(s) 1065
Seq#:7; Line(s) 1149
Seq#:8; Line(s) 1239
Seq#:9; Line(s) 1479
Seq#:10; Line(s) 1665
Seq#:11; Line(s) 1749
Seq#:12; Line(s) 1836
Seq#:13; Line(s) 1851
Seq#:14; Line(s) 1866
Seq#:15; Line(s) 1881
Seq#:16; Line(s) 1896
Seq#:17; Line(s) 1911
Seq#:18; Line(s) 1926
Seq#:19; Line(s) 1941
Seq#:20; Line(s) 1956
Seq#:21; Line(s) 1968
Seq#:22; Line(s) 1980
Seq#:23; Line(s) 1992
Seq#:24; Line(s) 2004
Seq#:25; Line(s) 2016
Seq#:26; Line(s) 2031
Seq#:27; Line(s) 2046
Seq#:28; Line(s) 2061
Seq#:29; Line(s) 2076
Seq#:30; Line(s) 2091
Seq#:31; Line(s) 2106
Seq#:32; Line(s) 2121
Seq#:33; Line(s) 2136
Seq#:34; Line(s) 2325

VERIFICATION SUMMARY

PATENT APPLICATION: US/09/236,939

DATE: 09/23/2003

TIME: 17:57:50

Input Set : N:\Crf3\RULE60\09236939.raw.txt

Output Set: N:\CRF4\09232003\I236939.raw

L:30 M:220 C: Keyword misspelled or invalid format, [(A) APPLICATION NUMBER:]

L:31 M:220 C: Keyword misspelled or invalid format, [(B) FILING DATE:]

STATISTICS SUMMARY

PATENT APPLICATION: US/09/236,939

DATE: 09/23/2003

TIME: 17:57:50

Input Set : N:\Crf3\RULE60\09236939.raw.txt

Output Set: N:\CRF4\09232003\I236939.raw

Application Serial Number: US/09/236,939

Alpha or Numeric or Xml: Alpha

Application Class:

Application File Date: 01-25-1999

Art Unit: OIPE

Software Application: OTHER

Total Number of Sequences: 35

Total Nucleotides: 15030

Total Amino Acids: 5675

Number of Errors: 0

Number of Warnings: 0

Number of Corrections: 2

MESSAGE SUMMARY

220 C: 2 (Keyword misspelled or invalid format)